

COUPON HOLDER/RACK

Corrosion Coupon Testing

Accurate monitoring of corrosion rates in any environment is critical when viewed in terms of the maintenance and repair costs associated with corrosion and material failure. Test coupons provide a cost-effective means to measure the corrosivity within your system. By observing the mils-per-year corrosion rate of an exposed coupon, valuable information is obtained regarding the material's life expectancy.

MarleyGard coupons are available for several metal categories. Coupons are stenciled with alloy and sequence numbers for proper identification. Mill test reports that identify the element composition of materials used are provided on all orders.



Advantages of Coupon Testing

Test coupons are low in cost, simple to conduct, and allow the simultaneous evaluation of numerous materials and variations of a single material. Alloy chemistry variations and metallurgical variations (e.g. the effect of heat treatment, microstructure, welding and stress) can be considered. Test coupons are easily adapted to evaluate specific types of corrosion, such as crevice corrosion and galvanic corrosion.

Corrosion Coupon Racks

The "quick disconnect" coupon rack is PVC with O-ring seal that requires no tools to remove the coupons. Simply hand loosen and tighten.

Corrosion coupon loop option includes the coupon holder(s), nylon coupon mounting hardware, inlet and outlet ball valves mounted on a corrosion-resistant polyethylene panel.

Types of Tests

Valuable data for estimating the probable service life of a piece of process equipment can be generated in a number of ways.

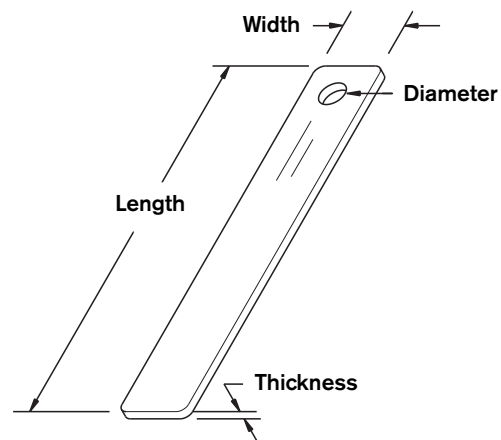
- 1. Operating Experience** The most reliable information is generated by actual operating experience with equipment in identical service. In a sense the equipment is being used as a large coupon. This is a costly and slow testing method, especially when data on several materials is needed.
- 2. Model Equipment** Model equipment installed parallel with actual equipment or in a small scale (pilot plant) operation can generate information about as reliable as full scale equipment. Care must be exercised to ensure that important variables are adequately simulated.
- 3. Field Coupons** Coupons exposed in operating equipment are widely used. Care must be taken to install the coupons so that they are exposed to the corrosive conditions of interest.
- 4. Laboratory Coupons** Coupons exposed to laboratory solutions from plant operations, or less reliable synthetic solutions which approximate the chemistry of plant streams, generate useful information if the tests are properly designed and conducted. Such tests allow study of the affect of changes in process chemistry on corrosion.
- 5. Instrumental Test Methods** Advanced methods including electrical resistance and linear polarization scans are valuable corrosion testing methods. They can generate a continuous record of corrosion rate. They also can be used to gain insight into corrosion mechanisms. The precautions noted with regard to coupon tests also apply with these methods.

Coupon Mounting

Coupons should be mounted in such a way that they are securely held and are electrically isolated from contact with all other metals (except when the purpose of the test is to study galvanic corrosion). Mounting materials (brackets, bolts, etc.) and insulating materials should be selected to be fully resistant to the environment. Failure of any of these components will lead to loss of data or loss of electrical isolation.

Time of Test

In general, coupon testin should be run for a minimum of one week. In many cases, it will be worthwhile and desirable to evaluate the effect of time of exposure which can be done by means of a controlled interval test.



Part	Description	Size	Hole	Hole Location
2599607	Mild Steel	1/2" x 3" x 1/16"	3/16"	1/4" from end
2599608	Copper	1/2" x 3" x 1/16"	3/16"	1/4" from end
2599632	304 Stainless Steel	1/2" x 3" x 1/16"	3/16"	1/4" from end
2599633	316 Stainless Steel	1/2" x 3" x 1/16"	3/16"	1/4" from end
2599630	Nickel	1/2" x 3" x 1/16"	3/16"	1/4" from end
2599609	Brass	1/2" x 3" x 1/16"	3/16"	1/4" from end
2599631	Aluminum	1/2" x 3" x 1/16"	3/16"	1/4" from end
2599635	Galvanized Steel	1/2" x 3" x 1/16"	3/16"	1/4" from end
2599634	316 Stainless Steel (Scale)	1/2" x 3" x 1/16"	1/4"	1/4" from end

SPX Cooling Technologies designs and manufactures cooling towers and other specialized heat exchangers, and provides water management products to support the execution of an effective water management plan (WMP) as outlined in ANSI/ASHRAE Standard 188. Water treatment professionals should be consulted to perform chemical delivery services.

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